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THE UNIVERSITY OF ALBERTA

A STUDY OF THE RELATIONSHIP BETWEEN ALEXITHYMIA AND EMPATHY

BY

LOUISE BUREAU (C)

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

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Date: September 28, 1989

This thesis is dedicated to the memory of

Dr. S.C.T. Clarke, Professor Emeritus

ABSTRACT

Clinical observations and theoretical assumptions suggest an inverse relationship between alexithymia and empathy. This exploratory study hypothesized a negative correlation between dimensions of alexithymia, as measured by the Toronto Alexithymia Scale (TAS), and dimensions of empathy, as measured by the Interpersonal Reactivity Index (IRI). The sample was comprised of 192 community college students from four different educational routes. A moderate and significant inverse correlation was found between the TAS alexithymia factor of externally-oriented thinking and the IRI empathy factor of perspective-taking. In addition, a moderate and significant inverse correlation was found between the TAS alexithymia factor of diminished daydreaming and the IRI empathy fantasy scale. An unexpected finding was a moderate and significant positive correlation between principal components of alexithymia, as measured by the TAS, and the IRI factor of personal distress empathy. Current results do not provide evidence to suggest that all dimensions of alexithymia and empathy are related. Findings of this study hold potential implications for selection and training in counselor education programs.

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STUDY OF THE RELATIONSHIP BETWEEN ALEXITHYMIA AND EMPATHY

Chapter I: Statement of the Problem

In the field of human relations there has been considerable interest in the nature of empathic understanding and communication, especially with regard to counselor effectiveness. Efforts have been made to discover conditions that facilitate or inhibit empathy. Recent literature has suggested a possible link between empathy and alexithymia (Krystal, 1979).

Alexithymia has been defined as an inability to recognize and verbalize one's own emotions (Sifneos, 1973). Originally observed in psychosomatic patients, alexithymia is now being studied in relation to normal populations. Empathy has been defined as the ability to understand another's feelings and thoughts (Rogers, 1957) and as the ability to verbalize this understanding to the other person (Egan, 1975). Since both alexithymia and empathy are theorized to have affective, cognitive, and verbal components, a possible basis for the link between the two constructs is identified.

The objective of this exploratory study was to test empirically the relationship between alexithymia and empathy. This study

hypothesized a significant inverse correlation between scores on a measure of alexithymia and scores on a measure of empathy. This hypothesis is consistent with theoretical definitions of each construct. If one cannot reflect on and express one's own emotions, it seems unlikely that one would be able to reflect on and communicate understanding of another's thoughts and feelings. It was thought that confirmation of the hypothesized relationship might hold important implications for selection and training in counselor education programs and in other disciplines where the ability to empathize is crucial. This study was also intended to extend knowledge concerning the presence of alexithymic traits in normal populations.

Chapter II: Literature Review

This review of the recent literature concerning alexithymia and empathy explores the possibility of relationship between the two constructs in the light of common theoretical and research issues.

Alexithymia

Development and Definition of a Construct

Alexithymia, literally meaning "without words for feelings", is a clinically derived construct observed first in psychosomatic patients. The term originally referred to an inability to identify and verbalize emotions, or an inability to distinguish between emotions and bodily sensations (Sifneos, 1973). Definition expanded to include a concrete operational cognitive style (Marty & de M'Uzan, 1963). This refers to substitution of action words for affective language; literal, imageless thought (Fricchione & Howanitz, 1985); a tendency to focus on external situations rather than on one's internal world (Taylor et al., 1988); and preoccupation with the objective, which minimizes ability to discover underlying meanings or to use metaphor (Warnes, 1985). Alexithymia further evolved to encompass minimal capacity to fantasize or daydream (Schneider, 1977). Finally, impaired ability to

reflect on interpersonal relationships was included (Flannery, 1977). It is now generally agreed that alexithymia is a multidimensional construct referring to a cluster of affective-cognitive traits (Taylor, Ryan, & Bagby, 1985) including: 1) inability to identify and verbalize emotion; 2) concrete cognitive style; 3) minimal fantasy and symbolic activity and 4) stereotypic interpersonal relationships.

Although there is a developing body of literature, the clinically derived definition of alexithymia is not yet substantiated by empirical evidence (Kruck, 1987). Empirical validation of a construct requires standardized measures (Lesser & Lesser, 1983). As an abstract concept, alexithymia has been a challenge to operationalize (Taylor & Bagby, 1988).

Measurement

A substantial amount of alexithymia research can be questioned for employing measures lacking adequate psychometric properties, reliability, and validation (Taylor & Bagby, 1988). Various measures used are uncorrelated with each other, making interpretation and generalization of results difficult. This has led some to think there is little empirical support for alexithymia, but it could be that various measures tap different facets of the multidimensional construct.

There are four types of measures of alexithymia. The Beth Israel Hospital Questionnaire (BIQ) is the most widely used observer-rated scale. Views on its inter-rater reliability are conflicting (Cohen, Auld, Demers, & Catchlove, 1985; Taylor & Bagby, 1988).

There are several self-report scales of alexithymia. The widely used Schalling-Sifneos Personality Scale (SSPS) and the MMPI Alexithymia Subscale have been found to lack reliability, validity, and internal consistency and are not recommended for research purposes by recent reviewers (Federman & Mohns, 1984; Paulson, 1985; Taylor & Bagby, 1988). The recently developed Toronto Alexithymia Scale (TAS) has adequate reliability, construct validity, criterion validity, internal consistency, and a stable and replicable factor structure (Bagby, Taylor, & Ryan, 1986; Taylor & Bagby, 1988; Taylor et al., 1988; Taylor, Ryan & Bagby, 1985).

Projective measures have been adapted to assess the fantasy and symbolic functioning aspects of alexithymia (Taylor & Bagby, 1988) and may prove useful once validated (Acklin & Bernat, 1987; Cohen et al., 1985; Demers-Desrosiers, 1985).

Finally, analysis of speech content, focused on presence or absence of affective language, has been used to measure alexithymia (Ahrens & Deffner, 1986).

Many researchers now recommend a multimeasure approach to the study and assessment of alexithymia (Ahrens & Deffner, 1986; Taylor & Bagby, 1988) since results using single measures are difficult to interpret (Sriram, Chaturvedi, Gopinath, & Shanmugam, 1987).

Construct Validation

The most central problem in alexithymia research has been lack of empirical validation of the construct (Gardos, Schniebolk, Mirin, Wolk, & Rosenthal, 1984; Papciak, Feuerstein, & Spiegal, 1985).

Recent research has concentrated on laboratory validation of various components of the alexithymia construct, with conflicting results. Several studies examine the affective factor. Vocal emotional expressiveness was found to be impaired in alexithymic versus non-alexithymic males but not in females (Kruck,1987); the hypothesis that alexithymics lack differentiation between affect and somatic sensations has been supported (Hering, 1987); and one study found alexithymics had decreased ability to tune into anxiety on a conscious level (Feiguine & Johnson, 1985). However, another study discovered alexithymics to be higher on self-reported anxiety, following a stressor, than non-alexithymics (Martin & Pihl, 1986). One group found that both alexithymics and non-alexithymics reported significant increases in depression, anger and confusion after a stressor (Papciak et al., 1985); another study found no significant relationship between alexithymia and affect differentiation (Divino, 1987); and the hypothesis that alexithymics substitute action for affect has not been statistically confirmed (Hering, 1987). A few studies have looked at the component of fantasy and daydreaming: one researcher found that alexithymics did not exhibit diminished fantasy and daydreaming on a global level but that they did show greater deficits than

non-alexithymics on subscales such as "Fantasy Absorption", "Hallucinatory Vividness of Daydreams", and "Interpersonal Curiosity Fantasies" (Martinez, 1986). Regarding somatization, some studies find no differences between alexithymics and non-alexithymics on report of medical problems (Martinez, 1986) or on somatization subscales (Taylor et al., 1988).

The above findings are inconsistent: more extensive research, using more accurate and reliable measures of alexithymia, is needed before conclusions can be drawn.

State or Trait?

There is unresolved debate in the literature concerning whether alexithymia is a personality trait or a situation-specific state (Warnes, 1986). Research accumulates evidence on both sides. Some studies employing content analysis of speech samples find that measures of verbal affective communication are influenced by research conditions, which points to a state view of alexithymia (Ahrens & Deffner, 1986; Taylor & Doody, 1985). However, another study using scores from speech samples upholds the trait approach to alexithymia (Taylor & Doody, 1985). A review of earlier studies employing rating scales shows no evidence for trait alexithymia (Ahrens & Deffner, 1986). A recent study comparing test-retest scores on Rorschach indices of alexithymia concluded that subjects were alexithymic in a predisposing trait sense, rather than in a state (or consequence of pain) sense (Acklin & Bernat, 1987). However, another study found that a group

scoring high in an acute medical situation did not score high in a non-acute situation whereas a second group, who enjoyed illness due to increased attention, yielded decreased alexithymia scores during acute disease: these findings support a state concept of alexithymia (Keltikangas-Jarvinen, 1987). Further research using measures of substantial validity and reliability is needed to resolve inconsistent findings.

Many researchers now follow Freyberger's distinction between primary (trait) alexithymia and secondary (state) alexithymia (Demers-Desrosiers, 1985). Secondary alexithymia has been viewed alternatively as a protective defense against serious illness (Freyberger, Kunsebeck, Lempa, Wellmann, & Avenarius, 1985); as frozen grief (Warnes, 1985); and as a response to massive psychic trauma in Nazi concentration camp survivors (Krystal, Giller, & Cicchetti, 1986) and in Viet Nam veterans (Shipko, Alvarez, & Noviello, 1983). One researcher concludes that all people have the ability to revert to a less emotive communication style at times, but that some exhibit this as a dominant trait (Taylor, 1984).

Relationship to Psychosomatic Illness

Originally, alexithymia was observed to occur in psychosomatic patients (Sifneos, 1973). It was thought that alexithymia creates internal conflicts which lead to psychosomatic illness (Sifneos, Apfel-Savitz, & Frankel, 1977).

Research has continued to implicate alexithymia in a broad range of somatic illnesses, though its role is unclear (Krystal et al., 1986). Conditions which have been related to alexithymia include: chronic pain (Acklin & Bernat, 1987; Catchlove, Cohen, Braha, & Demers-Desrosiers; Sriram et al., 1987); chronic somatization (Divino, 1987); chronic respiratory disease (Feiguine & Johnson, 1984, 1985; Feiguine & Jones, 1987); ulcerative colitis and Crohns disease (Freyberger et al., 1985; Keltikangas-Jarvinen, 1985); duodenal ulcer (Heerlein, De la Parra, Aronsohn, & Lolas, 1984); hypertension and coronary heart disease (Gage & Egan, 1984; Rybakowski, Dyson, & Amsterdam, 1988); rheumatoid arthritis (Vollhardt, Ackerman, & Shindledecker, 1986); and stress-related disease in general (Martin & Pihl, 1985, 1986). Indeed, nearly all types of patients have been characterized as alexithymic (Von Rad, 1984).

Despite the wealth of research, no definitive association between alexithymia and psychosomatic illness has been uncovered by empirical study (Papciak et al., 1985; Rybakowski et al., 1988). Alexithymics are not always psychosomatic and psychosomatics are not always alexithymic (Cohen et al., 1985). Studies of prevalence of alexithymia in psychosomatic patients have yielded conflicting results often due to small samples (Gage & Egan, 1984). However, one researcher did replicate Sifneos' early finding that psychosomatics exhibit alexithymic traits more frequently than neurotic controls by a ratio of 2:1 (Buzov, 1985). Prevalence of alexithymia in patient

populations may be as high as 30% in contrast to a prevalence of 1.9 to 8% in normal populations (Faryna, Rodenhauser, & Torem, 1986). Some recent empirical and well controlled studies support higher incidence of alexithymia in patients suffering from a variety of psychosomatic complaints (Acklin & Bernat, 1987; Keltikangas-Jarvinen, 1985; Martin & Pihl, 1985; Sriram et al., 1987; Vassend, 1987). It is also found that for some psychosomatic patients, presence of alexithymia increases severity of symptoms and makes the course of illness more difficult (Rybakowski et al., 1988). A few empirical studies of patient populations have challenged the theoretical conception that alexithymics are prone to somatization (Papciak, Feuerstein, Belar, & Pistone, 1986-87;Taylor et al., 1988; Vollhardt et al., 1986). A study of the relationship between alexithymia and somatic complaints in the normal population found alexithymia to be negatively related to somatization (Vassend, 1987).

Even if alexithymia is related to psychosomatic illness, it is not known whether alexithymia precipitates or sustains illness (Von Rad, 1984). Those who contend that psychosomatics are alexithymic in a predisposing sense posit a chronic decoupling of cognitive-affective states and psychophysiological somatic reactivity as having a central role in symptom development, especially in stress-related disorders (Martin & Pihl, 1985, 1986; Martin et al., 1986; Vassend, 1987). This hypothesis has received tentative empirical support (Acklin & Bernat, 1987; Martin, Pihl, Young, Ervin, & Tourjman, 1986; Papciak et al.,

1985; Rabavilas, 1987). There is controversy as to whether there is an (alexithymic) predisposing personality type in psychosomatic patients separate from that of somatic or psychoneurotic patients. An empirical study found differences in these three groups in their verbal affective expression, but only at the conscious level (Ahrens, 1985).

Related to the question of alexithymia being a predisposing factor in somatization is the problem of correlation versus causation. The causal relationship is confirmed by one study of differential morbidity in alexithymic and non-alexithymic hypertensives (Gage & Egan, 1984) but is disconfirmed by a predictive study (Greenberg & Dattore, 1983). This does not conflict with the idea that alexithymia can result from the stress of disease or that alexithymia may influence the psychomaintenance of illness. One study found that alexithymia contributes significantly to rehospitalization of alexithymic asthmatics (Feiguine & Johnson, 1985).

Originally studied in relation to classical psychosomatic disorders, alexithymia has now been applied far beyond the context of psychosomatic illness (Warnes, 1986) and is reported in patients with a wide range of medical and psychiatric disorders: these include masked depression, character neuroses, sexual perversion (Taylor, 1984); masked panic attacks (Jones, 1984); medically ill patients requiring psychiatric consultation (Rybakowski et al., 1988); substance abuse disorder (Krystal et al., 1986; Haviland, MacMurray, &

Cummings, 1988); anorexia nervosa (Bourke, Taylor, & Crisp, 1985); and genetic risk of alcoholism (Finn, Martin, & Pihl, 1987). Alexithymia has been observed in the healthy, in the organically sick and somatizers, in the anti-social and in split-brain patients: it has been suggested that anyone could manifest alexithymic characteristics in a conducive situation (Von Rad, 1984).

In summary, the literature supports a general relationship between alexithymia and physical illness, in keeping with the trend in psychosomatic medicine to look at the role of psychological factors in all illness, not just in "psychosomatic" illness (Cooper & Holmstrom, 1984).

Etiology of Alexithymia

Various studies have led to much hypothesizing but insufficient evidence regarding the etiology of alexithymia. Psychological and physiological models have been proposed (Nemiah, 1985).

Psychological theories include the dynamic-conflict model and developmental models. Traditional psychodynamic models hypothesize that alexithymia develops either as a defense against anxiety (McDougall, 1984; Sifneos, 1983; Sifneos et al., 1977) or as a result of impairment of object relations requisite for development of intrapsychic structures for expression of emotion and cognitive imagery (Acklin & Bernat, 1987; McDougall, 1984; Sifneos, 1983; Simon, 1987; Von Rad, 1984). However, an empirical study found object relations to be unrelated to lexithymia - continuous ability to

express feelings in words, existing on the opposite end from alexithymia on a continuum (Simon, 1987).

Developmental models suggest that alexithymia originates from: 1) developmental arrests due to familial, social or cultural factors inhibiting the expression of emotion and imagination (McDougall, 1984; Sifneos, 1983; Sifneos et al., 1977) and 2) primitive levels of cognitive-developmental emotional awareness (Lane & Schwartz, 1987) or affect maturity (Hering, 1987). This last hypothesis was statistically confirmed by one study (Hering, 1987).

Physiological explanations posit a range of possible deficits to account for the etiology of alexithymia. These include congenital defects, biochemical deficiencies (Sifneos et al., 1977) and genetic factors (Sifneos, 1983). Some researchers suggest deficits in the biological system influencing response to affect- provoking situations (Catchlove et al., 1985) although it is not clear exactly where the difficulty lies. Others more specifically suggest problems in affect processing or appraisal (Cohen et al., 1985; Finn et al., 1987; Martin et al., 1986; Papciak et al., 1986-87). Such deficit models are highly theoretical in nature and require empirical validation. A major physiological explanation for the development of alexithymia suggests neurological impairment (Nemiah, 1985). Deficits have been conceptualized as structural deficiencies in underlying neuronal pathways; specific brain lesions (Nemiah, 1985); right hemisphere inadequacies (Miller, 1986-87; Fricchione & Howanitz, 1985); left

frontotemporal lesions (Blackshaw & Bowen, 1987); and manifestation of a functional disconnection between cerebral hemispheres (Ten Houten, Hoppe, Bogen & Walter IV, 1985). There has been considerable research in this area. One study found significant positive correlation between conjugate lateral eye movements and alexithymia for all 102 subjects, suggesting a relationship between right hemisphere deficits and alexithymia (Cole & Bakan, 1985). A study finding higher incidence of alexithymia in left-handed individuals implicates right hemisphere or corpus callosum function impairments (Rodenhauser, Khamis, & Faryna, 1986). A group of researchers have focused on comparing the affectless, concrete communicative style of alexithymics with that of patients suffering commissural disconnection: commissurotomy subjects, compared to controls, used a lower percentage of affect-laden words; were more cognitively concrete; scored higher on level of psychosomatic personality structure; and had lower levels of interhemispheric coherence (Ten Houten et al., I-IV, 1985; Ten Houten, Walter, Hoppe, & Bogen, 1987).

It has been suggested that primary alexithymia may be accounted for by neurophysiological, deficit models whereas secondary alexithymia may be explained by psychological models (Lesser & Lesser, 1983; Sifneos, 1983).

Treatment

Etiological issues give rise to the question of the reversibility of alexithymia. Can an adult who is unaware of and unable to express

his inner feelings learn to do this (Shands, 1977)? Treatment suggested depends on etiological model. More empirical validation for treatment of alexithymia is needed (Sifneos, 1983).

Alexithymics are unresponsive to traditional psychotherapy (Krystal et al., 1986; Sifneos, 1973). Some researchers suggest that psychiatric treatment may be required for primary alexithymia but insight-oriented therapy may be appropriate for secondary alexithymia (Lesser, 1985; Sifneos, 1983; Warnes, 1986).

Suggested therapeutic interventions for alexithymia include relaxation techniques (Sifneos et al., 1977); therapist stimulation of patient associative material (McDougall, 1984); therapist modelling of communication of feeling (Wolff, 1977); group psychotherapy involving naming and discussing feeling states (Apfel-Savitz, Silverman, & Bennett, 1977); systematic desensitization, (Gardos et al., 1984); biofeedback, (Lesser, 1985); and low doses of tranquilizers (Taylor, 1984).

Some writers now support a modified psychodynamic approach which incorporates many of the above interventions (Hering, 1987). They suggest beginning with physical therapies and then progressing through imagery techniques to a more insight-oriented approach at a pace acceptable to the patient (Catchlove et al., 1985). The effectiveness of a similar model has been studied empirically: results indicated improvement regarding anxiety and depression in treatment subjects compared to controls (Freyberger et al., 1985). Modified

psychotherapeutic techniques, biofeedback, and relaxation remain the treatments of choice (Eisenberg, 1983).

Correlates of Alexithymia

The relationship between demographic variables and alexithymia has been unclear. Concerning sex differences, earlier research found alexithymia to be more prevalent among males than females (Keltikangas-Jarvinen, 1985, 1987; Paulson, 1985; Rodenhauser et al., 1986; Rybakowski et al., 1988). However, the most recent studies have found alexithymia to be unrelated to sex (Loiselle & Dawson, in press; Parker, Taylor, & Bagby, in press). Again, many earlier researchers found alexithymia to be positively correlated with age (Feiguine & Johnson, 1985; Papciak et al., 1986-87; Rybakowski et al., 1988), whereas the latest researchers find no relationship between age and alexithymia (Loiselle & Dawson, in press; Parker et al., in press). A significant negative correlation between alexithymia and level of education has been noted by some (Faryna et al., 1986; Rodenhauser et al., 1986) but not by others (Feiguine & Johnson, 1985; Paulson, 1985). A few studies suggest alexithymia is unrelated to social class (Keltikangas-Jarvinen, 1985; Paulson, 1985): others state alexithymia is influenced by sociodemographic variables (Sriram et al., 1987).

Empathy

Development and Definition of a Construct

Barrett-Lennard (1981) traces the roots of the term empathy, meaning feeling-perception and strong feeling-connection with another, similar to the process of total absorption in a work of art.

The counseling field yields a proliferation of definitions and models of empathy. Affective and cognitive components are common to all definitions. Rogers (1957) and Truax and Carkhuff (1967) defined empathy as the ability to understand the client's thoughts and feelings from the client's frame of reference. Recognition of the client's feelings is thought to stem from the counselor's awareness of his or her own feelings. Understanding of clients' meanings develops through cognitive identification as one would identify with the main character in a novel. Truax and Carkhuff add the component of communicating empathic understanding to the client. Both perceptual and communicative facets of empathy are viewed as key factors in promoting a client's growth.

Barrett-Lennard's definition (1981) suggests three phases of empathy. The first is "empathic resonation" - a spontaneous, unconscious, emotional response and total imaginative absorption in another (Gladstein & Feldstein, 1983), occurring within the empathizer. The second phase is "expressed empathy", involving deliberate, conscious identification with the client. The third phase,

"received empathy" (or perceived empathy), introduces another component: that of how the client receives the empathizer's response.

Various writers provide specific elaborations of the affective, cognitive, and communicated aspects of empathy. The perceptual ability to detect and decode cues about the emotional state of another, and tolerance of ambiguity are implicated (Barak, Engle, Katzir, & Fisher, 1987; Bowman & Reeves, 1987; Jackson, 1984). Cognitive complexity is a mediating variable in the use of metaphor or imagery, vehicles for communicating counselor empathy (Brothers, 1989; Suit & Paradise, 1985). Role-taking empathy is an inferential process, in which imagination is an important factor (Gladstein & Feldstein, 1983). Keefe (1976) adds that empathy requires facility in cognitively sorting and labelling feelings. Definitions of cognitive empathy establish its basis as the capacity to deal with abstract ideas (Clark, 1980).

Considerable confusion has arisen from lack of a clear, single definition and comprehensive theoretical approach to empathy (Clark, 1980; Gladstein, 1983; Riggio, Tucker, & Coffaro, 1989). Recently, several researchers have suggested that empathy should be viewed as a multidimensional construct (Davis, 1980; Harman, 1986; Riggio et al., 1989). A current multidimensional model posits four factors: 1) perspective-taking, referring to spontaneous role-taking in everyday life; 2) a fantasy factor, referring to the ability to transpose oneself imaginatively into the positions of characters in movies,

novels, plays, daydreams, and other fictional situations; 3) empathic concern, or other-oriented feelings of warmth, compassion, and concern for the unfortunate and 4) personal distress, or self-oriented personal feelings of anxiety resulting from observing another's negative experience (Davis, 1980, 1983). Some authors imply that personal distress empathy can interfere with the counseling process since it moves the counselor away from the client psychologically (Gladstein, 1983).

Measurement

The abstract nature of empathy and the variety of its definitions has made it difficult to operationalize (Gladstein, 1983). Various measures of empathy prove to be uncorrelated (Bachelor, 1988; Barrett-Lennard, 1981; Gladstein, 1983). Many suggest that this is because various instruments tap different aspects of a complex phenomenon. Some recommend development of different measures for each type or phase of empathy (Bachelor 1988; Barrett-Lennard, 1981; Gladstein, 1983). A multi-measure approach, combining trait and state measures is also suggested (Gladstein, 1983). One researcher has recently developed a standardized measure based on a multifactor approach (Davis, 1980, 1983). As with alexithymia, the lack of correlation between measures has led to inconsistent research findings and difficulties in interpretation (Gladstein, 1983). Further, early empathy research can be questioned for using measures lacking validity (Gladstein, 1983; Watson, 1984).

Gladstein (1983) classifies the empathy measures from the counseling field as objective and subjective. Objective measures involve external judgments of actual counseling sessions and tap communicated empathy. Truax's Accurate Empathy Scale and Carkhuff's Empathic Understanding Scale are the most widely used. Validity of these scales has been questioned because they do not measure empathy from the client's perspective and because of methodological problems (Barkham & Shapiro, 1986; Gladstein, 1983).

Subjective measures rate clients' perceptions of counselor empathy and tap received empathy. The Barrett-Lennard Relationship Inventory and the Truax Relationship Questionnaire are examples.

Evaluative approaches to empathy have also been classified as situational (state) or trait. Commonly used measures from the counseling field are state measures. It is suggested that an accurate measure of trait empathy would predict a level of empathy a counselor would characteristically express across counseling situations with various clients (Watson, 1983). Some trait measures of empathy have been developed in the field of social psychology (Gladstein, 1983; Lomis & Baker, 1985). A recent trait measure is the Interpersonal Reactivity Index (IRI). The IRI is comprised of four subscales, described earlier in this review, each measuring a separate aspect of the global concept of empathy: perspective-taking, a fantasy scale, empathic concern, and personal distress (Davis, 1980, 1983). The IRI has adequate reliability, validity, consistent factor structure (Davis, 1980,

1983; Carey, Fox, & Spraggins, 1988) and replicated normative data (Evans, Stanley, Burrows, & Sweet, 1987). Further, the IRI may provide a solution to two challenges in empathy measurement. As a self-report instrument, it might be used to tap the empathic resonation phase. Secondly, it provides a measure of personal distress empathy: mixed results of outcome studies may have resulted from not accounting for the negative effect of elevated personal distress (Gladstein, 1983).

Finally, Gladstein (1983) notes that emotional, empathic reactions have been evaluated by including palmar sweating as a physiological indicator of empathy.

Construct Validation

The variety of definitions and measures of empathy has complicated validation of the construct. Different researchers have focused on validation of different aspects.

A key validity issue concerns the proposal that empathy is a core condition in facilitating positive counseling outcomes. Many earlier studies challenged this proposal: however, one author refutes the challenge, on the grounds that these studies were based on inadequate sampling of counseling sessions and interpretations were subject to researcher bias (Patterson, 1984). One study found that a measure of received empathy was more strongly related to outcome than other types of empathy measures, as would be expected theoretically (Barrett-Lennard, 1981).

Earlier research found some evidence to suggest that "sensitivity to emotions" (perceptual ability to identify and understand another's affective communication) influences empathy-related interpersonal effectiveness in general, but is not specifically related to expression of empathy in the professional interview: a study using the latest revision of the Kagan Affective Sensitivity Scale found sensitivity to emotions to be significantly correlated with communicated empathy in an analog counseling interview (Jackson, 1984).

The strongest findings occur in the area of validation of cognitive, role-taking aspects of empathy. One follow-up study confirms that role-taking is central to ability to empathize (Bowman & Reeves, 1987). Higher levels of cognitive complexity and flexibility, abstract thought, and tolerance of ambiguity have been significantly correlated with empathic communication (Brown & Smith, 1984; Dallas, 1986; Lutwak & Hennessy, 1982; Strohmer, Biggs, Haase, & Purcell, 1983) and perceived empathy (Maniei, 1985). An empirical study suggests that moderately complex metaphors facilitate perceived empathy (Suit & Paradise, 1985).

There is some research evidence for the multidimensional view of empathy. A recent study identified differential empathic styles on a measure of perceived empathy, including cognitive and affective styles (Bachelor, 1988). An experimental study found that cognitive and affective types of empathy had differential effects on emotional reactions to dramatic film stimuli (Davis, Hull, Young, & Warren,

1987). Relationships among empathy subscales of the Interpersonal Reactivity Index support previous theorizing about empathic tendencies: greater perspective-taking ability is associated with greater feelings of empathic concern and less feelings of personal distress in response to another's negative experience (Davis, 1980). The influence of personal distress on empathy is further supported by a study that found a significant correlation between cognitive complexity and empathy but not between anxiety and empathy (Strohmer et al., 1983). Another study confirms that empathy, sadness, and distress are three separate but interrelated vicarious affective responses to others' misfortune (Fultz, Schaller, & Cialdini, 1988).

State or Trait?

As with alexithymia literature, the empathy literature reveals a debate concerning whether empathy is dispositional or situational in nature. A recent writer suggests that trait or characteristic empathy can be standardized across counselor-client situations (Watson, 1983, 1984). Others conclude that a trait concept of empathy is not supported by the literature (Cross & Slee, 1984) and is refuted by qualitative differences between stages of counseling (Barkham & Shapiro, 1986). Some suggest that state empathy (revealed in individual differences in empathic response) progresses logically from personal ability (Barrett-Lennard, 1981). This was empirically confirmed by a study which found that training-induced changes in state empathy were predicted by high levels of trait empathy (Steibe, Boulet, & Lee,

1979). It could be that trait empathy refers to the empathic resonation phase occurring within the empathizer, whereas state empathy could refer to communicated and perceived phases of empathy.

Explanations for Empathy

Both psychological and physiological models have been proposed to account for empathy. Some parallels exist with explanations for the etiology of alexithymia.

Psychological hypotheses include classical conditioning (Brothers, 1989; Gladstein, 1983) and role-taking learned as a result of social experience (Gladstein, 1983; Lomis & Baker, 1985). Some suggest that unempathic responses from parents inhibit development of empathy in children (Brothers, 1989; Hoffmann & Frank, 1987).

The most prominent hypotheses explaining empathy are cognitive-developmental models. Developmental contributions to theories of empathy, based on Piaget's work, suggest that ability to cognitive role-take develops in stages and matures with experience: this involves progression from an egocentric, inflexible, concrete cognitive style to a less egocentric, more flexible, and more abstract cognitive style (Gladstein, 1983; Lutwak & Hennessy, 1982; Strohmer et al., 1983). The relationship between conceptual level and empathy has been tentatively confirmed by empirical study (Bowman & Reeves, 1987; Lutwak & Hennessy, 1982).

A recent writer suggests that empathy is a complex construct requiring somatic, subjective, and interpersonal explanations

(Brothers, 1989). Somatic mimicry is one such account: this involves involuntary imitation of the sender's non-verbal communication, generating autonomic activity in the empathizer (Brothers, 1989).

Other biological models of empathy suggest that individuals are born with a base capability of brain functioning which can be expanded by cognitive maturation and experience. Clark (1980) implicated the anterior frontal lobes: impairment of this area due to lobotomy, injury, or lesion produces rigidity and decreased capacity for abstract thought and empathy. More recently, Brothers (1989) proposed a neurophysiological substrate of empathy. He cited evidence for the possible involvement of several brain regions: right tempoparietal lesions lead to impaired understanding of feelings in tone of voice; right hemisphere lesions can create deficits in expression of emotions through prosody or spontaneous gesture. Animal models of empathy facilitate study of neural processes underlying empathy. Such studies have located neurons that encode facial expression and a cell that is sensitive to crouching body posture. Studies of neural firing characteristics also reveal responsiveness to social stimuli.

Training

As with alexithymia, empathy literature raises the question of whether or not changes can be effected in capacity for empathy. Hackney indicated that direct training of empathy is challenging because of its intangible nature (Brown & Smith, 1984). Clark (1980) posits that some people are born with such limited cortical base for

empathy that potential for them to learn empathy is minimal. Developmental literature, however, suggests that empathy can be learned by most (Gladstein, 1983). Considerable research indicates that training does improve state empathy, leading some to suggest that empathic communication is teachable, but that empathic resonation or trait empathy may not be teachable (Steibe et al., 1979). Past frameworks for teaching counseling skills assumed that anyone can learn empathy: considerable variation in degree of mastery of empathy among trainees appears to refute this assumption (Lutwak & Hennessy, 1982).

In counseling, training has focused on communicative aspects of empathy (Gladstein & Feldstein, 1983). Two standard approaches to counselor training have provided effective programs which indicate that communicated empathy and empathic understanding can be taught: these are Truax and Carkhuff's didactic-experiential programs and Ivey and Ivey's microcounseling method (Barak et al., 1987; Crabb, Moracco, & Bender, 1983). There may be an optimal age for learning empathy, as one study indicated that trainees over fifty did not attain facilitative levels of empathy, while most young trainees did (Steibe et al., 1979). Only one study, which evaluated the effects of a newly developed microcounseling skill on counselor empathy, found no significant results from training (Long, 1987).

Specific methods for improving level of empathy, with empirically demonstrated effectiveness include: simple verbal instructions,

modeling, behavior rehearsal, role-playing, practice, and feedback (Barak et al., 1987; Crabb et al., 1983; Edwin & Growick, 1982); reviewing videotaped trainee counseling sessions to identify missed cues from clients (Hornblow, Kidson, & Ironsides, 1988); use of an empathy algorithm (Shaffer & Hasegawa, 1984); simulation games (Barak et al., 1987); GSR monitoring or biofeedback to provide clues to clients' feelings (Edwin & Growick, 1982); and exposure to high level empathy in counselor trainers (Sultanoff, 1983).

Some cognitive approaches suggest focusing on raising the cognitive developmental level or perceptual framework of the trainee before trying to teach empathic skills (Bowman & Reeves, 1987; Gladstein, 1983; Lutwak & Hennessy, 1982; Strohmer et al., 1983). Cognitive models indicate that therapists can learn empathy through role-taking (Gladstein, 1983). A study combining role-taking, imaginal exercises, and microtraining found them to be effective even with a group of violent offenders lacking empathy (Lomis & Baker, 1985).

Little training has focused on the early emotional reaction phase of empathy (Gladstein & Feldstein, 1983). The psychological experience of this early stage parallels the aesthetic experience of emotionally identifying with film characters. Gladstein and Feldstein suggest that counselor educators can use film watching to help trainees gain insight into the first stage of empathy. Counselor's imaginations can find emotional connections with a wide variety of film characters, thus expanding their capacity for empathy.

Correlates of Empathy

In general, females appear more empathic than males (Cross & Slee, 1984; Davis, 1980; Gladstein, 1983; Riggio et al., 1989; Steibe et al., 1979; Wise & Cramer, 1988). More specifically, females score higher on all four subscales of the Interpersonal Reactivity Index, with the smallest difference occurring on the Perspective Taking Scale (Davis, 1980) and the greatest difference occurring on the Personal Distress Scale (Wise & Cramer, 1988). Other research supports the notion that sex differences regarding role-taking empathy are insignificant but that females exceed males in emotional contagion and communicated empathy (Gladstein, 1983; Riggio et al., 1989). It could be that males and females vary in the way they are empathic (Riggio et al., 1989).

The Relationship Between Alexithymia and Empathy

Theoretical definitions suggest that alexithymia and empathy are abstract, multidimensional constructs at opposite ends of a continuum from each other on affective, cognitive, symbolic, communicative, and interpersonal dimensions. It is possible that both constructs may manifest as stable personality traits and/or as temporary situational states. Affective/cognitive developmental models and neurophysiological models are proposed to explain both constructs. Similar strategies for remediating alexithymia and for

teaching empathy are suggested, including biofeedback, modeling, and affect education.

The negative relationship between alexithymia and empathy makes sense theoretically and has been observed clinically. Patients in group and individual therapy have demonstrated reduced capacity for empathy (Apfel-Savitz et al., 1977; Krystal, 1979; Vassend, 1987). A non-empathic personality style has been noted parenthetically in several experimental alexithymic groups (Keltikangas-Jarvinen, 1987; Miller, 1986-87; Feiguine & Jones, 1987).

However, the relationship between alexithymia and empathy requires empirical study. Past research concerning both constructs has yielded inconsistent results due to the use of small samples and differing instruments, sometimes lacking adequate psychometric properties. Improved measurement and construct validation of both concepts, in addition to use of larger samples, would facilitate research seeking to clarify the relationship between alexithymia and empathy.

Chapter III: Methodology

Overview

A correlational research design was used to test the hypothesized relationship between alexithymia and empathy. This study was interested in examining the relationship between the two constructs in **normal** populations rather than in **patient** populations as it was expected that counselor trainees would come from the former. Therefore research was conducted drawing a sample from an accessible population of normal subjects who were students at Grant MacEwan Community College, which offers two year diploma programs. Brief self-report measures of the two variables were used for data collection to facilitate gathering information from the large sample required for a correlational study. Correlation coefficients were computed to determine the nature and degree of relationship between the two constructs.

Sample

To provide as broad a range in the sample as possible, in order to obtain true correlational measures, subjects were selected from four different educational routes within the college: 1) Community

Services, 2) Academic Services, 3) Business, and 4) Performing and Visual Arts. The Community Services Division encompasses programs training students for helping roles in various capacities: programs include Child Care Worker, Correctional Services, Early Childhood Development, Law Enforcement and Security, Rehabilitation Practitioner, Social Services Worker, and Teacher Aide. The Academic Services Division incorporates programs in English, General Arts and Science, Humanities, Sciences, and Social Sciences. Programs in the Business Division are: Business Development, Accounting, Advertising and Public Relations, Applied Research, Insurance Administration, Legal Assistant, Library Technician, Management Studies, Microcomputer Management, Secretarial Studies, Travel Consultant, and Voluntary Sector Management. Finally, the Performing and Visual Arts Division embraces programs in Arts Administration, Audiovisual Communications, Dance, Journalism, Music, Native Communications, Theatre Arts, Theatre Production, Visual Art, and Visual Communication.

The sample was drawn by randomly selecting classes from an active course list for each of the four educational routes. The objective was to select enough classes from each division to provide a potential sample of approximately 50 subjects from each route and an overall sample of approximately 200 subjects.

In the Community Services Division, classes in the Early Childhood Development Program and the Teacher Aide Program

were excluded from selection because students were predominantly female: inclusion of these classes would have biased results. The class randomly selected from Community Services was from the Correctional Services Program. Entitled "Correctional Security I", the course covers principles and practices of correctional security procedures, including inmate supervision, management, and control. There were 47 students registered in this course. Students in the Correctional Services Program are preparing to work with adult and young offenders in community agencies and institutions. As graduates of this program, students might work as a Correctional Officer, a Living Unit Officer, or as a counselor in a half-way house or group home. They will perform the dual role of protection of the public and rehabilitation of the offender: therefore, they are trained both in security techniques and in counseling skills. All the participants from this program were first year students, with the exception of one second year student. At the time of this study, the first year students had not yet taken counseling courses and had not received training in empathy. The second year student would have taken counseling courses.

From Academic Services, two classes were selected initially: Psychology 353 (Developmental Psychology) with 24 students and Sociology 371 (Marriage and the Family) with 35 students. A back-up class - English 210 (English Literary Forms) with 20 students - was also selected because an insufficient number of participants was

obtained from the first two classes. Students in Academic Services are working towards a one year certificate or a two year diploma in liberal arts: some are taking first and second year university transfer courses towards degrees in arts and science. All three courses selected for participation in this study were university transfer courses. There were 21 first year students and 26 second year students in the group studied from this program.

Only two programs from the Business Division agreed to participate in this study: these were Accounting and Management Studies. The class selected was from the Accounting Program. Entitled "Financial Accounting", this course deals with techniques and principles of modern accounting and preparation of financial statements. There were 75 registrants in the course. Graduates of the Accounting Program might be employed in government, private business, financial institutions, and in general or public accounting firms. Course work in the program includes cost accounting, finance, taxation, auditing, computer applications and management skills. All students who participated from this program were first year students.

Finally, the class selected from the Performing and Visual Arts Division came from the Visual Communication Program. The course was titled "History of Design I": this is a survey course drawing material from the history of art and design, focusing on communication and product design. There were 73 students enrolled in this

course. Students in the Visual Communication Program major in one of three areas. Display/Visual Presentation majors are trained to display merchandise in store interiors and to design and dress store windows. Environmental Graphic Design majors are trained in sign and symbol design, packaging, and exhibition design. Graphic Design majors receive commercially oriented training in graphic concepts, advertisement, brochures, magazine layouts and illustration to corporate identities, information graphics, camera ready art and paste-up. Students in all three majors are required to take History of Design I. All students who participated from this program were first year students, with the exception of one second year student.

Although classes were randomly selected for the sample, individual students within selected classes participated on a voluntary basis. Each class, except for the back-up class, was visited a week prior to data collection and received a general explanation of the study so that time was allowed to make a decision about participation. The back-up class received the general explanation the day of data collection. Students were informed that their involvement (or lack of involvement) would in no way affect their status in the course or in the college. On the day of data collection, students who did not wish to participate were allowed to leave the classroom.

The final sample consisted of a total of 201 subjects (out of a possible 274 subjects). The breakdown of subjects by educational route was as follows: Community Services - 43; Academic Services

- 47; Business - 49; and Performing and Visual Arts - 62. The distribution of subjects by sex was as follows: 140 subjects (70%) were female and 61 subjects (30%) were male. Subjects ranged in age from 17 to 54, with the mean age being 24.76. All subjects were registered in two year day programs: 169 subjects (85%) were first year students, while 29 subjects (15%) were second year students.

Measurement

Alexithymia was measured by administering the Toronto Alexithymia Scale (TAS). This is a self-report instrument which asks subjects to rate themselves according to extent of agreement/disagreement on a 5 point Likert scale. Half of the items are positively-keyed and half are negatively keyed to control for social desirability. The shorter, 26 item form of the scale was used since it fit better into the twenty minute time frame requested for data collection, and reliability and validity of this form have been established. Split-half reliability of the TAS is reported at r=0.672. Test-retest reliability has been reported at r=0.82 over one week and at r=0.75 over five weeks (Taylor et al., 1985). Criterion validity of the TAS was established recently: TAS scores were found to be significantly higher for a group of patients identified by two out of three raters as alexithymic, compared to a group identified as non-alexithymic (Taylor et al., 1988). Factor analysis has demonstrated that TAS items measure factors congruent with the alexithymia construct (Taylor et al., 1985).

The four factors yielded are: 1) ability to identify and describe one's feelings and to distinguish feelings and bodily sensations; 2) ability to communicate feelings to others; 3) daydreaming (corresponding to fantasy and symbolic activity); and 4) externally-oriented thinking (corresponding to concrete cognitive style). Both the TAS total score and scores for the four factors were used for computing correlation coefficients in this study. The TAS was appropriate to use with this sample as it was originally normed with a Canadian university student sample.

Empathy was measured by administering the Interpersonal Reactivity Index (IRI). This 28-item scale is also a self-report instrument in Likert format. It is comprised of four 7-item subscales, each measuring a different facet of the global concept of empathy. Subscale items are keyed both positively and negatively. Factor analysis has demonstrated that subscale items measure factors congruent with a multidimensional approach to empathy (Davis, 1983). The four factors measured are: 1) perspective-taking (cognitive role-taking component of empathy in real life); 2) fantasy (imaginative experience of, and identification with the thoughts and feelings of fictitious characters in books and movies); 3) empathic concern (feelings of warmth, compassion, and concern for unfortunate others); and 4) personal distress (personal feelings of anxiety due to awareness of another's negative experience). Standardized alpha reliability estimates for the four subscales range from .68 to .79. Test-retest reliability for the

four empathy subscales has been reported to range from .61 to .81 over 60 to 75 days (Davis, 1980). Construct validity of the four subscales has been demonstrated (Davis, 1983). The Perspective-Taking Scale, which is the most cognitive in orientation, correlates significantly beyond the .05 level with the Hogan Empathy Scale, a widely used measure of cognitive empathy (mean r=.40). The Fantasy Scale and the Empathic Concern Scale (more affective in orientation) are significantly related to the Mehrabian and Epstein Emotional Empathy Scale (mean r's of .52 and .60 respectively). Correlation between the Personal Distress Scale (emotional orientation) and the Mehrabian and Epstein Emotional Empathy Scale is less substantial (mean r=.24). The Interpersonal Reactivity Index does not yield a total score that can be interpreted meaningfully. Therefore, in this study only subscale scores were used to compute correlation coefficients. The IRI was appropriate for use with the sample in this study because it was originally normed using a college student sample.

Procedures

The researcher met individually with instructors from selected classes to gain cooperation for the study. Instructors were kept blind to the specific purpose of the study, to guard against such knowledge leading them to consciously or unconsciously influence student responses.

The researcher visited classes a week prior to data collection to gain student cooperation on a voluntary basis. Students were informed that the general purpose of the study was to find out how students think about themselves. They were not told the specific purpose of the study. Titles of the Toronto Alexithymia Scale and the Interpersonal Reactivity Index were removed from data collection sheets to further blind subjects to the purpose of the study: the TAS was entitled "Questionnaire #1" and the IRI was entitled "Questionnaire #2". To encourage participation, it was indicated to the students that results of this study might have potential importance for many fields. To encourage honest responses, subjects were assured of confidentiality and anonymity. Names were not recorded on data collection sheets. Each student recorded only age, sex, year, course title, and educational route on a cover sheet which had been pre-stapled together with the two measurement instruments. Data sheets were coded numerically after administration.

Data was collected on November 7 and 8, 1988. This point in the college trimester was chosen to avoid contamination of results due to beginning of term orientation or mid-term/final exam tension. The data was collected by this researcher in every class to maximize potential for standard administration across situations. Time of data collection was staggered over two days in order to accommodate all the classes. The two instruments were administered during a twenty minute period at the beginning of each class selected.

The researcher visited selected classes following data analysis to report back to participants the specific purpose and findings of the study.

Data Analysis

Pearson Product Moment Correlations were computed to determine the nature and degree of relationship between the total alexithymia score and empathy subscale scores, and between alexithymia factor scores and empathy subscale scores. Alpha level for determining significance of results was set at .05.

Chapter IV: Results

In general, descriptive data for the TAS and IRI for the sample from this study were found to be very similar to normative data for each measure, with a few notable exceptions which will be outlined. Some significant negative correlations emerged between alexithymia and empathy scores, as expected. However, not all dimensions of alexithymia and empathy correlated significantly. In addition, a few scales from the TAS and the IRI showed significant *positive* correlations, which had not been expected. Some significant differences were noted between the four educational groups, on TAS and IRI scores.

Toronto Alexithymia Scale

Total scores for the TAS ranged from 34 to 84 (out of a possible range of 26 to 130), with a mean score of 62.65 and a standard deviation of 9.73. These results compare favorably with those obtained from the original normative group for the TAS, as shown in Table 1.

Table 1

Comparison of Groups' Total Scores: Toronto Alexithymia Scale

	Norm Group				Present Sample			
Subjects	**n**	**Range**	**Mean**	**S.D.**	**n**	**Range**	**Mean**	**S.D.**
Total	542	29-99	61.80	11.27	192	34-84	62.65	9.73
Male	172	35-91	63.32	10.90	57	39-79	62.21	8.05
Female	370	29-99	61.11	11.33	135	34-84	62.83	10.38

Note. Because of missing values, sample size varied for different analyses.

Whereas in the original sample the mean for males was higher than that for females, in the present sample the mean score for males was slightly lower than that for females. However, a T-test analysis indicated that this difference was not significant (t=-0.40; two tailed, p=.69). Using cut-off scores recently established by the TAS developers (Taylor et al., 1988), it was determined that 26 subjects (14% of the sample) scored within the alexithymic range (a score of 74 or above): of these 26 subjects, 20 were female (15% of the females in the sample) and 6 were male (10% of the males in the sample). A further 85 subjects (44% of the sample) fell within the non- alexithymic range (a score of 62 or below): of these 85 subjects, 58 were female (43% of the females in the sample) and 27 were male (48% of the males in the sample). Finally, 81 subjects (42% of the sample) scored within an indeterminate range (63 to 73): of these 81 subjects, 57 were

female (42% of the females in the sample) and 24 were male (42% of the males in the sample).

TAS factor scores for the present overall sample are reported in Table 2. These results cannot be compared to TAS norms as referent data are not available.

Table 2

Descriptive Data: TAS Factor Scores

Variable	n	Actual Range	Possible Range	Mean	S.D.
TAS F1	198	11-48	11-55	27.69	7.60
TAS F2	199	7-28	7-35	19.04	4.70
TAS F3	197	5-22	5-25	11.31	3.83
TAS F4	201	6-23	6-30	13.24	3.48

Note. TAS F1: diminished ability to identify feelings, distinct from bodily sensations. TAS F2: difficulty communicating feelings. TAS F3: diminished daydreaming. TAS F4: externally-oriented thinking.

Although the mean TAS total score for males was lower than that for females, this was not the case for all the TAS factor scores (Table 3). The mean score for males was lower on TAS factor one (difficulty identifying feelings and distinguishing feelings from physical sensations), but the mean for males was higher than that for females on the other three TAS factors. However, sex differences on these factors were non-significant, as indicated by results of a Hotellings T2 test (T2=7.94, p=.10).

Table 3

Comparison of TAS Factor Scores for Males and Females

Variable	Males			Females		
	n	Mean	S.D.	n	Mean	S.D.
TAS F1	59	26.31	5.98	139	28.27	8.14
TAS F2	60	19.38	3.64	139	18.89	5.10
TAS F3	60	12.08	3.72	137	10.96	3.83
TAS F4	61	13.33	3.60	140	13.20	3.45

Note. TAS F1: diminished ability to identify feelings, distinct from bodily sensations. TAS F2: difficulty communicating feelings. TAS F3: diminished daydreaming. TAS F4: externally-oriented thinking.

Internal reliability for TAS total scores was assessed. Cronbach's alpha was .68: Taylor et al. (1985) reported Cronbach's alpha level at .74 in their original administration of the TAS. For the present results, elimination of TAS items 2, 5, 16, and 18 would have improved Cronbach's alpha to .74: all four of these items relate to the TAS daydreaming factor. However, internal reliability analysis for TAS factor scores yielded different results. Cronbach's alpha for TAS factors one and two (difficulty in identifying and communicating feelings) was .80; for TAS factor three (diminished daydreaming) Cronbach's alpha was .74; and for TAS factor four (externally-oriented thinking) Cronbach's alpha was .56.

Interpersonal Reactivity Index

Results for the overall sample for the IRI measure of empathy are reported in Table 4. It is not possible to compare the results with norms for the total original sample for the IRI as these data are not available (the author of the IRI only reported norms for each sex, and did not report norms for the overall sample).

Table 4

Descriptive Data for Total Sample for the Interpersonal Reactivity Index

Variable	n	Range	Mean	S.D.
Perspective-Taking	199	0-28	17.40	4.97
Fantasy Scale	199	3-28	16.94	5.36
Empathic Concern	200	7-28	20.68	4.33
Personal Distress	200	0-27	11.33	5.03

Note. Perspective-Taking: cognitive, role-taking empathy in real life. Fantasy Scale: tendency to identify imaginatively with fictional characters. Empathic Concern: other-oriented feelings of warmth and compassion for those in distress. Personal Distress: self-oriented feelings of discomfort due to observing another's distress.
Potential range of 0-28 per variable.

Table 5 indicates sex differences on the IRI factors for the present sample in comparison with normative data for the IRI (Davis, 1980). As the table indicates, results from the current sample are similar to those from the original sample. Compared to men, women scored

higher on each IRI empathy factor in the present sample. A Hotellings T2 analysis indicated a significant difference between groups (T2=14.88, p=.007). The variable contributing to this finding was the IRI empathic concern factor, where the mean score for females was 21.37 compared to a mean score for males of 19.07 (F=2.44, p=.048).

Table 5

Comparison of Groups' Scores on the IRI (by sex)

Variable	Norm Group				Present Sample			
	Male		Female		Male		Female	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
IRI PT	16.78		17.96		16.28	5.36	17.88	4.73
IRI FS	15.73		18.75		15.70	5.24	17.48	5.34
IRI EC	19.04		21.67		19.07	4.61	21.37	4.03
IRI PD	9.46		12.28		10.47	4.08	11.69	5.36

Note. IRI PT: role-taking empathy. IRI FS: fantasy scale (imaginative identification with fictional characters). IRI EC: empathic concern. IRI PD: personal distress. Standard deviations not reported for the norm group.

Internal reliability for IRI factor scores was found to be comparable to that reported by Davis (1980). Cronbach's alpha for the perspective-taking scale and the fantasy scale was .76; for the empathic concern scale, Cronbach's alpha was .74; and Cronbach's alpha for the personal distress scale was .76.

Correlational Analyses

Pearson Product Moment correlations were computed to test the hypothesis of a significant inverse relationship between alexithymia and empathy. Because a directional hypothesis was posed, a one-tailed test was used to determine statistical significance (alpha=.05). The results of the correlational analysis for the variables studied are shown in Table 6.

A statistically significant negative correlation was found between the total TAS score and the IRI factor score for perspective-taking empathy (r=-.18, p=.007). A significant positive correlation of moderate size was found between the total alexithymia score and the empathy factor of personal distress (r=.43, p=.000). No significant correlation was discovered between the TAS total score and the IRI fantasy and empathic concern scales.

Some statistically significant correlations emerged between TAS factor scores and IRI factor scores. Significant inverse correlations were found between the TAS diminished daydreaming factor score and the IRI fantasy scale score (r=-.36, p=.000), between the TAS factor of externally-oriented thinking and the IRI perspective-taking factor (r=-.29, p=.000), between TAS externally-oriented thinking and the IRI empathic concern scale (r=-.19, p=.003), and between the alexithymia factor of diminished identification of feelings and the IRI perspective-taking factor (r=-.13, p=.033).

Significant positive correlations appeared between the TAS factor of reduced identification of feelings and the IRI empathy factor of

personal distress (r=.46, p=.000) and between the second TAS factor (inhibited communication of feelings) and IRI personal distress (r=.39, p=.000). A slight positive correlation was found between the TAS factor of difficulty in identifying emotions and the empathy fantasy scale (r=.15, p=.015). No other significant relationships were discovered between the alexithymia and empathy variables measured.

Table 6

Correlations Between Alexithymia and Empathy Variables

Variable	TAS F1	TAS F2	TAS F3	TAS F4	TAS Total
IRI PT	-.13*	-.06	.08	-.29**	-.18**
IRI FS	.16*	.01	-.36**	.03	-.02
IRI EC	-.04	-.07	.04	-.19**	-.10
IRI PD	.46**	.39**	-.11	.07	.43**

Note. TAS F1: diminished ability to identify feelings, distinct from bodily sensations. TAS F2: difficulty communicating feelings. TAS F3: diminished daydreaming. TAS F4: externally-oriented thinking. IRI PT: role- taking empathy. IRI FS: fantasy scale (imaginative identification with fictional characters). IRI EC: empathic concern. IRI PD: personal distress.

*p.<. 05

**p.<.001

Because the magnitude of the correlations between alexithymia and empathy scores were not as high as might have been expected theoretically, a correction for attenuation was conducted, using the Lisrel procedure. The model for this analysis was based on the original correlation matrix obtained in this study, and on the theoretical assumption that alexithymia influences empathy. Results of the Lisrel procedure are reported in Table 7. The correction for attenuation indicated that the **underlying** correlation between the alexithymia factor of externally- oriented thinking and the empathy factor of perspective-taking (r=-.54) is higher than the **observed** correlation (r=-.29). In addition, the **underlying** correlation between the alexithymia diminished daydreaming factor and the empathy fantasy scale (r=-.49) is greater than the **observed** correlation (r=-.36). The **underlying** correlation between the alexithymia factor of diminished identification of one's feelings and the empathy factor of personal distress (r=.41) is slightly lower than the **observed** correlation (r=.46): and the **underlying** correlation between the alexithymia factor of inhibited communication of feelings and the empathy factor of personal distress (r=.17) is considerably lower than the **observed** correlation (r=.39). Further, the correction for attenuation indicated no **underlying** correlation between the remaining alexithymia and empathy factors, whereas there were some slight **observed** correlations between these remaining factors. The goodness of fit index indicated 89% agreement between the model estimating

the **underlying** correlations and the **observed** correlations. The differences between the **underlying** correlations and the **observed** correlations are significant (Chi-square=45.21, p<.0001, df=18).

Table 7

Underlying Correlations Between Alexithymia and Empathy Factors

Variable	TAS F1	TAS F2	TAS F3	TAS F4
IRI PT	.00	.00	.00	-.54
IRI FS	.00	.00	-.49	.00
IRI EC	.00	.00	.00	.00
IRI PD	.41	.17	.00	.00

Note. TAS F1: diminished ability to identify one's feelings, distinct from physical sensations. TAS F2: diminished ability to communicate feelings. TAS F3: diminished daydreaming. TAS F4: externally-oriented thinking. IRI PT: perspective-taking empathy. IRI FS: fantasy scale (imaginative identification with fictional characters). IRI PD: personal distress.

Pearson Product Moment correlations were also computed to examine the relationship between the alexithymia and empathy variables and age. Results are indicated in Table 8. Slight statistically significant inverse correlations were found between age and the TAS factors for diminished identification of feelings (r=-.22, p=.001) and externally-oriented thinking (r=-.15, p=.016). A moderate positive correlation was found between age and the TAS diminished day-dreaming factor (r=.34, p=.000). Slight, statistically significant cor-

relations were found between age and the IRI fantasy scale (r=- .17, p=.009) and the IRI personal distress scale (r=.17, p=.008).

Table 8

Correlations Between Alexithymia/Empathy Variables and Age

	TAS F1	TAS F2	TAS F3	TAS F4	TAS Total
Age	-.22**	-.08	.34**	-.15*	-.10
	IRI PT	**IRI FS**	**IRI EC**	**IRI PD**	
Age	.10	-.17**	.02	-.17**	

Note. TAS F1: diminished ability to identify feelings, distinct from bodily sensations. TAS F2: difficulty communicating feelings. TAS F3: diminished daydreaming. TAS F4: externally-oriented thinking. IRI PT: role-taking empathy. IRI FS: fantasy scale (imaginative identification with fictional characters). IRI EC: empathic concern. IRI PD: personal distress.

*p<.05

**p<.001

Additional Analyses

Groups from the four educational routes were tested for significant differences on scores for the TAS and IRI. Group differences on the TAS total mean score were tested using an analysis of variance (ANOVA). The overall ANOVA was not significant (F=2.39, p=.07)

Group differences on the TAS and IRI factor scores were tested using a multiple analysis of variance (MANOVA). For the TAS factors, the overall MANOVA was significant (F=2.86, p=.001). Further examination of univariate F-tests revealed that all the variables contributed to the overall result. A multiple comparisons test was

done, using the Scheffe test, to determine where the differences were between groups. Results are reported in Table 9. There were no significant differences between groups on TAS factor one (diminished ability to identify one's own feelings, distinct from physical sensations). Business students scored significantly higher than Community Services students on TAS factor two (difficulty with communicating feelings). The group mean on TAS factor three (diminished daydreaming) was significantly higher for Community Services students than for Performing and Visual Arts students. Finally, there were no significant differences between group scores on TAS factor four (externally-oriented thinking).

For the IRI factors, the overall MANOVA was significant ($F=2.27$, $p=.01$). Further examination of univariate F-tests revealed that the IRI fantasy scale, empathic concern scale, and personal distress scale contributed to the overall result. A multiple comparisons test was done, using the Scheffe test, to determine where the differences were between groups. There were no significant differences between groups on the IRI perspective-taking scale, empathic concern scale, or personal distress scale. Performing and Visual Arts students scored significantly higher than Community Services students on the IRI fantasy scale (imaginative identification with fictional characters). It is noteworthy that Community Services students did not score higher on any of the empathy factors measured.

Table 9

Group Differences on the TAS and IRI (by educational route)

	Business Mean	Community Services Mean	Academic Services Mean	Performing & Visual Arts Mean
TAS Total	65.25	60.32	61.18	63.30
TAS F1	28.89	25.00	26.80	29.17
TAS F2	20.60*	17.34*	18.56	19.12
TAS F3	11.89	12.07*	11.80	9.90*
TAS F4	13.08	13.80	12.09	13.90
IRI PT	16.79	17.63	18.45	16.90
IRI FS	16.48	15.35*	16.89	18.35*
IRI EC	20.96	20.88	21.80	19.45
IRI PD	12.73	9.88	11.27	11.21

Note. TAS F1: diminished ability to identify one's feelings, distinct from physical sensations. TAS F2: difficulty with communicating feelings. TAS F3: diminished daydreaming. TAS F4: externally-oriented thinking. IRI PT: perspective-taking empathy. IRI FS: fantasy scale (imaginative identification with fictional characters). IRI EC: empathic concern. IRI PD: personal distress.

*Denotes groups that are significantly different.

Cautionary Note

The author wishes to emphasize that the results of this study are a function of group rather than individual scores. No inferences regarding individuals can be made on the basis of these results. Furthermore, no decisions about individuals should be made on the basis of these findings alone, due to their preliminary nature. Finally, the author points out that results of this study are based on a college student sample, so that inferences to populations beyond college students cannot be drawn.

Chapter V: Discussion

Results of this study extend understanding of alexithymia in normal populations. Findings provide some initial and tentative understanding concerning the degree and nature of the relationship between alexithymia and empathy. Some implications for future research and for counselor education can be suggested.

Discussion of Descriptive Data Concerning Alexithymia

Although earlier research indicated an incidence of 1.9 to 8% of alexithymic individuals in normal populations, this study's finding of 14% scoring within an alexithymic range parallels reports of 17% and 18.8% in other recent studies using the TAS and normal samples (Loiselle & Dawson, in press; Parker et al., in press). Thus, current results lend further support to the notion that prevalence of alexithymia in normal populations may be higher than originally thought, remembering that results of this study cannot be generalized beyond college student populations. This finding may imply or confirm a need for affective education to assist some lay people in real life relationships, outside professional helping contexts.

As with the Loiselle and Dawson report, this study found that a higher percentage of females than males scored within the

alexithymic range. It has been speculated theoretically that women might display alexithymic traits more than men, due to heightened autonomic sensitivity (Cooper & Holmstrom, 1984). However, in this case, the finding may be due to the proportionately higher number of women in the sample. In addition, this study's finding of no significant sex differences on TAS mean scores is supported by other recent research using normal samples (Loiselle & Dawson, in press; Parker et al., in press). These results appear to contradict literature which suggests that alexithymia is more prevalent in males. However, early research was based primarily on psychosomatic samples. A more recent study found that psychosomatic males scored higher on alexithymia but that normal males did not, and the researcher suggested that it is a **combination** of the two predispositional factors that leads to higher alexithymia scores (Keltikangas-Jarvinen, 1985). It may be that higher prevalence of alexithymia in males occurs only in patient populations. Another explanation of the more recent findings might be that a newer and more reliable instrument was used in the research.

The lack of a significant positive relationship between the overall alexithymia score and age conflicts with some earlier alexithymia literature. However, correlations between TAS factor scores and age may provide some clarification. It could be that it is primarily the diminished daydreaming component of alexithymia that is positively associated with age, whereas reduced ability to identify one's feelings

and externally-oriented thinking aspects of alexithymia may actually show some improvement with increasing age. The lack of significant positive correlations could also be an artifact of this study, in that the restricted age range of the sample permits less variability. However, two recent studies, using the TAS, have found (global) alexithymia to be unrelated to age (Loiselle & Dawson, in press; Parker et al., in press).

This study's replication of descriptive norms for the TAS is important since the instrument has been developed recently and has not been widely used as yet.

Discussion of Descriptive Data Concerning Empathy

Results for the IRI parallel the findings of a recent replication study (Carey et al., 1988). Again, this replication of norms for the IRI is noteworthy as it, too, is a newly developed instrument.

Sex differences on the IRI found in this study are consistent with the empathy literature which supports the notion that women are more empathic than men. This study's finding that empathic concern distinguished most significantly between women and men supports other writers' conclusions (Gladstein, 1983; Riggio, Tucker et al., 1989) that the sexes differ primarily in emotional empathy, but not significantly on role-taking empathy. In this regard, Davis (1980) found the smallest IRI sex difference for perspective- taking empathy. He found the largest difference on the fantasy scale of the IRI. This

current study found the smallest sex difference on personal distress empathy whereas another recent study found the smallest difference on perspective-taking and the largest difference on personal distress (Wise & Cramer, 1988). Results are inconclusive so far as to which facet of empathy contributes most to sex differences.

The highly significant inverse relationship between age and the empathy fantasy factor parallels and supports the finding that the alexithymic factor of reduced daydreaming appears to increase with age. This may shed some light on the research finding of one study that trainees over the age of 50 did not attain a facilitative level of empathy in comparison with younger trainees (Steibe et al., 1979). The inverse relationship between personal distress and age makes sense in light of theory concerning the construct. It is held that level of personal distress relates to level of self-other differentiation, which increases developmentally. With maturity, self-centered empathic distress gives way to other-oriented concern, coinciding with the development of greater role-taking ability.

Conclusions Concerning Relationships Between Alexithymia and Empathy

The hypothesis of a significant inverse relationship between alexithymia and empathy was confirmed in part, by this study. It can be said, on the basis of present results, that some aspects of alexithymia are negatively related to some aspects of empathy. There

is good evidence for an inverse relationship between the alexithymic feature of externally-oriented thinking and perspective-taking empathy, (although, it must be remembered that the measure for externally-oriented thinking demonstrated less internal reliability in this study), as well as between the alexithymia reduced daydreaming component and the empathy fantasy factor (again, this interpretation is qualified by the fact that subjects in this study tended to be inconsistent in responses to the alexithymia daydreaming factor). These results are taken to be encouraging, even though the observed correlations are not of a high magnitude, for several reasons. First, the results are highly significant. Second, as indicated by the results of the correction for attenuation, the actual correlation between the cited variables is probably higher, when error in each measure is accounted for. Reported reliability of the TAS and IRI is adequate, but might be improved: the shortness of the scales for measuring each factor on the TAS and IRI may also account for smaller observed correlations, as longer tests are more reliable. Finally, the observed correlations are taken to be promising considering the limitations of the self-report measures used. Besides the social desirability issue, denial of problems on a self-report measure is consistent with the alexithymia construct (Cooper & Holmstrom, 1984).

Observed correlations suggest that there is supportive evidence for an inverse relationship between global alexithymia and perspective-taking empathy, between the alexithymia factor of reduction in

identification of personal feelings and perspective-taking empathy, and between alexithymic externally-oriented thinking and empathic concern. However, the correction for attenuation suggests that the preceding relationships do not exist. More research is needed to determine the conclusiveness of these interpretations.

The unexpected, sizeable and highly significant positive relationships between personal distress empathy and alexithymia (global alexithymia, reduced identification of one's own feelings, and reduced ability to communicate feelings) is understandable in terms of theory concerning both constructs. Personal distress empathy is defined as personal feelings of dis-ease in tense interpersonal situations or as self-oriented feelings of discomfort due to observing another's misfortune. It could be said that awareness of another person's suffering creates stress in the observer. Several writers have conceptualized alexithymics as vulnerable to stress because of deficits in affective awareness and communication and in cognitive imagery, which normally facilitate coping with stress or anxiety (Acklin & Bernat, 1987; Ahrens, 1985; Lesser, 1985). An alternate theoretical explanation for the positive relationship between alexithymia and personal distress empathy is that alexithymics have lower levels of self-other differentiation: thus, they may experience another's distress as their own, and again lack mechanisms to cope (Hering, 1987). Yet another theoretical view suggests that emotionally mature individuals release tension through acting to remove the source of distress and

through verbal expression in interpersonal relationships, whereas less mature individuals externalize their feelings of discomfort. Alexithymics would fall into the latter category, so that their higher incidence of personal distress might be seen as projection of their own unidentified feelings onto others. Finally, personal distress empathy is thought to detract from other facets of empathy, as it moves the empathizer psychologically away from the other to a focus on self. This idea was confirmed, in part, by Davis' (1980) finding of a slight negative relationship between perspective-taking empathy and personal distress (r=-.16 for males, r=-.29 for females) on the IRI.

The above findings are limited to describing the relationship between alexithymia and the **condition** of empathy (ability to understand empathically). Further research, using other types of measures of empathy, is needed to explore the relationship between alexithymia and **communicated** and **perceived** empathy. In addition, causal relationships between the two constructs cannot be inferred on the basis of the results of this correlational study. Caution should be taken concerning the observed correlations between TAS "factor" scores and empathy factor scores. These relationships are of interest and the observed correlations are not surprising given that factor scores appear to measure theoretically related concepts, but factor structures for the TAS have not been used as subscales by the developers of the instrument and do not have established reliability,

although other researchers have used TAS factor scores in a correlational study (Loiselle & Dawson, in press).

Very low and insignificant observed correlations between remaining dimensions of alexithymia and empathy indicate that the two constructs may not be related in all aspects. This notion is further supported by results of the correction for attenuation. It is conceivable that some individuals are much better at focusing on others' problems and feelings (possibly as a means of avoiding internal reflection) and develop this as an interpersonal skill separate from self-awareness and self-disclosure. If further research finds this to be the case, it will refute the theoretical contention that awareness of one's own feelings is a prerequisite for empathy.

One might speculate that inverse correlations of a greater magnitude might be found between alexithymia and empathy in psychosomatic patient populations than were observed in the normal sample used in this study.

In summary, this study concludes that significant inverse relationships exist between some specified dimensions of alexithymia and some facets of empathy, while significant positive relationships exist between other aspects of the two variables, and other dimensions of the two traits show no significant relationship.

Discussion of Group Differences

Although it was not a primary aim of this study to hypothesize or predict group differences concerning alexithymia and empathy, findings in this regard are of interest. The surprising result of no difference between groups for the total alexithymia score is qualified by the significant differences found for two alexithymia factor scores. One might conclude that individuals from different educational routes tend to be alexithymic in different ways.

The finding that Business students scored significantly higher than Community Services students on TAS factor two (diminished ability to communicate feelings) could make sense given that these students were in Accounting. It might be that people with a business and mathematical orientation have a more factual, concrete communicative style. Loiselle and Dawson (in press) suggest that observed deficits in ability to communicate feelings, may result from a person having the view that it is not important to disclose feelings, rather than from actual difficulty in this regard. It is possible that Accounting students might have such a view towards communication of emotion, especially within the business context. That Performing and Visual Arts students scored significantly lower than Community Services students on TAS factor three (impoverished daydreaming and symbolization) is not surprising: one might expect Performing and Visual Arts students to have greater powers of fantasy and symbolization. The significantly higher score for Community Services

Students on TAS factor three is of note. These students were from the Correctional Services Program. It could be that such students have a need to focus themselves and their clients on concrete reality. In conclusion, the fact that two TAS factors revealed group differences that did not emerge from the TAS overall score, implies that separate measurement of the various aspects of alexithymia deserves consideration.

It is noteworthy that no significant differences emerged between the four educational groups on perspective-taking empathy: Gladstein suggests that role-taking empathy is the most important for establishing facilitative conditions with a client. If this is so, individuals from all four educational backgrounds may have potential to be effective helpers. It is predictable that Performing and Visual Arts students had significantly higher scores on the fantasy component of empathy and noteworthy that this contrasted with a significantly lower score for Community Services students on the fantasy component of empathy. The fact that Community Services students did not score significantly higher on any empathy factor might be explained by the dual role of the Corrections worker - that of being a security officer as well as a counselor. Such students might not be able to afford to empathize too much with the offender's point of view, and certainly would be ineffective if they became overly anxious about the offender's misfortune. It could be that students from a program with a more singular counseling role might score higher

on some facets of empathy. In conclusion, the group differences indicated by IRI factor scores in this study, confirm the value of measuring separate aspects of empathy, rather than measuring empathy as a global construct.

Implications Regarding Measurement

The first major implication for consideration arising from this study is that there is a need for more refinement of measures of alexithymia and empathy. Such modification would facilitate further research that will provide more conclusive answers concerning the relationship between the two variables and how such knowledge might be used to inform selection and training in counseling programs. In particular, there is a need for a multidimensional measure of alexithymia. The use of a total score clouds the individual influences of separate aspects of alexithymia. The Toronto Alexithymia Scale might be developed further to meet this need, by expanding the number of items for each of the four factors, and by establishing reliability for subscales. Longer versions of both the TAS and the IRI would be beneficial, at any rate, since longer tests are more reliable and would yield more accurate measures of the true relationship between the two constructs. Another alternative for future research would be to use a multimeasure approach: several instruments, each tapping a different facet of alexithymia, could be

used and results correlated with the IRI or multiple measures of empathy.

Implications for Selection in Counselor Training Programs

Another implication of this study is that the tentatively demonstrated partial association between alexithymia and empathy may hold some promise for assisting counselor educators in selecting trainees with the most potential for empathy. Considering the low correlations observed in this study, it is apparent that much of the variance on empathy scores is accounted for by variables other than alexithymia, so it would be premature to use alexithymia as a central criterion for screening applicants to counseling programs. However, it might be appropriate to include a pre-training assessment of alexithymia together with predictive instruments (which might include the IRI) used to determine a trainee's potential. In light of the need for counseling programs to select applicants with the maximum potential to achieve facilitative levels of empathy after short training periods, it seems that further research to provide more conclusive answers concerning the relationship between alexithymia and empathy would be of value.

Further development of multidimensional measures of alexithymia and empathy may allow for more comprehensive and refined selection of counselor students. For instance, counselor educators may need to ask **which** aspects of empathy are most important in

producing counseling outcomes - and thus, most important in would-be counselors. Gladstein's suggestion that role-taking empathy is most crucial for establishing rapport with a client may lead educators to attach more weight to scores on perspective-taking empathy than scores on empathic concern and the empathy fantasy factor, as a criterion for selection. In addition, this study indicates that weight should be given to scores on personal distress empathy in screening out inappropriate candidates. The question is raised as to whether the fantasy component of empathy is an essential ingredient for future counselors. A whole avenue of experimental research lies in the direction of exploring which types of empathy produce specified counseling outcomes. As Gladstein (1983) indicates, past research efforts have been too global: he suggests, for example, that cognitive and affective empathy are helpful for client self-exploration, whereas affective empathy may not be as facilitative for identifying and exploring problems. It could be that the fantasy component of empathy does not relate to positive counseling results as much as role-taking or affective empathy. Further research might explore this question and determine if this component is a valid criterion for selection of counseling trainees.

Again, development of subscales of the TAS to measure alexithymia factors more accurately might prove useful in assessing counselor potential. Given that the first two factors are so significantly related to personal distress, weight might be attached to these

variables. In addition, the significant relationship between TAS factor four (externally-oriented thinking) and the empathy factors of perspective-taking and empathic concern (considered important for positive counseling results) suggests that this alexithymic feature could be a worthy criterion as well.

Group differences observed in this study may also have implications for selection of counseling students. Applicants with backgrounds in the visual or performing arts may be good candidates due to their higher powers of symbolic and imaginative identification.

Implications for Counselor Training

If further research confirms the relationship between alexithymia and empathy that receives tentative support from this study, this could hold implications for empathy training as well. Especially with the refinement of multidimensional measures for both constructs, counselor educators would be provided with a more specific way to diagnose deficits inhibiting empathy and a more specific focus for developing empathy in trainees. In the past, it seems that educators have concentrated on training empathy as a global entity, or on training students particularly in role- taking empathy. The following questions arise out of the results of this study. Do counseling trainers need to concentrate on cultivating other facets of empathy, such as the fantasy factor? Should counseling trainees be encouraged to pursue exposure to performing and visual arts experiences to increase

their capacity for empathy? Should counselor training programs incorporate film viewing to develop empathy, as Gladstein and Feldstein suggest (1983)? Since empathic concern may be inversely related to the alexithymic feature of externally-oriented thinking, can affective empathy be increased by helping trainees to reflect inward more? Additionally, there may be some value in teaching counselor trainees to access **different** facets of empathy for **different** purposes, at **different** stages in the counseling process, along the lines of Gladstein's suggestions.

Some researchers have indicated that a fruitful focus for counselor education is the removal of blocks to empathy (Brown & Smith, 1984). One such block is personal distress which this study indicates is positively related to alexithymia. The question arises, can personal distress be minimized? It has been suggested that personal distress can be reduced by minimizing trainee anxiety and simultaneously heightening cognitive complexity (Strohmer et al., 1983). Habituation may also decrease arousal level. Relaxation training may also be helpful here. Another block to empathy seems to be degree of alexithymic features. The multidimensional view of alexithymia potentially offers educators more options for reducing conditions that inhibit empathy. It could be, for example, that some trainees need extra concentration on pre-counseling skills such as self-awareness and self-disclosure, which relate to the first two TAS factors (identification and communication of feelings). In this regard,

biofeedback may also be helpful. It is possible that other trainees would benefit from remedial training in the alexithymic feature of diminished daydreaming, which relates to symbolization. Could expressive arts therapy or visualization training assist in this area? Regarding the alexithymic feature of externally-oriented (concrete) thinking, there is some evidence to suggest that more abstract levels of thought can be stimulated in counselor trainees (Bowman & Reeves, 1987).

Again, group differences observed in this study may have implications for counselor training. Counseling trainees might benefit from including courses from the performing and visual arts in their academic plan. A case might also be made for interdisciplinary training, or for incorporation of training methods from other disciplines in counselor education.

Summary

This study provides preliminary support for the existence of an inverse relationship between the alexithymic feature of externally-oriented thinking and perspective-taking empathy as well as between alexithymic reduced daydreaming and the empathy fantasy factor, as measured by the Toronto Alexithymia Scale and the Interpersonal Reactivity Index. Further, this study finds a moderate positive relationship between personal distress empathy and principal components of alexithymia. These findings require replication. Current results do not provide evidence to suggest that all dimensions of

alexithymia and empathy are related. Further refinement of multi-dimensional measures of the two variables will facilitate additional research which is needed to substantiate speculated implications for selection and training in counselor education programs.

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APPENDIX 1

Toronto Alexithymia Scale

Using the scale provided as a guide, indicate how much you agree or disagree with each of the following statements by placing a circle around the appropriate number. Give only one answer for each statement - 1) Strongly Disagree, 2) Moderately Disagree, 3) Neither Disagree nor Agree, 4) Moderately Agree, 5) Strongly Agree.

1. When I cry I always know why.
2. Daydreaming is a waste of time.
3. I wish I were not so shy.
4. I often get confused about what emotion I am feeling.

*5. I often daydream about the future.

*6. I seem to make friends as easily as others do.

7. Knowing the answers to problems is more important than knowing the reasons for the answers.
8. It is difficult for me to find the right words for my feelings.

*9. I like to let people know where I stand on things.

10. I have physical sensations that even doctors don't understand.

*11. It's not enough for me that something gets the job done; I need to know why and how it works.

*12. I'm able to describe my feelings easily.

*13. I prefer to analyze problems rather than just to describe them.

14. When I'm upset, I don't know if I am sad, frightened or angry.

*15. I use my imagination a great deal.

*16. I spend much time daydreaming whenever I have nothing else to do.

17. I am often puzzled by sensations in my body.

18. I daydream rarely.

19. I prefer to just let things happen rather than to understand why they turned out that way.

20. I have feelings that I can't quite identify.

*21. Being in touch with emotions is essential.

22. I find it hard to describe how I feel about people.

23. People tell me to describe my feelings more.

*24. One should look for deeper explanations.

25. I don't know what's going on inside me.

26. I often don't know why I'm angry.

* *Indicates negatively keyed items.*

Note. TAS Factor 1 (diminished ability to identify one's own feelings, distinct from physical sensations): items 1, 4, 8, 10, 12, 14, 17, 20, 22, 25, 26. TAS Factor 2 (difficulty with communicating feelings): items 3, 6, 8, 9, 12, 22, 23 (note that some items load on both TAS Factor 1 and TAS Factor 2). TAS Factor 3 (diminished daydreaming): items

2, 5, 15, 16, 18. TAS Factor 4 (externally-oriented thinking): items 7, 11, 13, 19, 21, 24.

APPENDIX 2

Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by circling the appropriate letter A, B, C, D, or E. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank-you.

ANSWER SCALE:

A	B	C	D	E
DOES NOT DESCRIBE ME VERY WELL				DESCRIBES ME VERY WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me.
2. I often have tender, concerned feelings for people less fortunate than me.
*3. I sometimes find it difficult to see things from the "other guy's" point of view.
*4. Sometimes I don't feel very sorry for other people when they are having problems.

5. I really get involved with the feelings of the characters in a novel.
6. In emergency situations, I feel apprehensive and ill-at-ease.
*7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it.
8. I try to look at everybody's side of a disagreement before I make a decision.
9. When I see someone being taken advantage of, I feel kind of protective towards them.
10. I sometimes feel helpless when I am in the middle of a very emotional situation.
11. I sometimes try to understand my friends better by imagining how things look from their perspective.
*12. Becoming extremely involved in a good book or movie is somewhat rare for me.
*13. When I see someone get hurt, I tend to remain calm.
*14. Other people's misfortunes do not usually disturb me a great deal.
*15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
16. After seeing a play or movie, I have felt as though I were one of the characters.
17. Being in tense emotional situations scares me.

*18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

*19. I am usually pretty effective in dealing with emergencies.

20. I am often quite touched by things that I see happen.

21. I believe that there are two sides to every question and try to look at them both.

22. I would describe myself as a pretty soft-hearted person.

23. When I watch a good movie, I can very easily put myself in the place of a leading character.

24. I tend to lose control during emergencies.

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

27. When I see someone who badly needs help in an emergency, I go to pieces.

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

* *Indicates negatively-keyed items.*

Note: IRI Perspective-Taking Factor: items 3, 8, 11, 15, 21, 25, 28. IRI Fantasy Factor: items 1, 5, 7, 12, 16, 23, 26. IRI Empathic Concern Factor: items 2, 4, 9, 14, 18, 20, 22. IRI Personal Distress Factor: items 6, 10, 13, 17, 19, 24, 27. Scoring: A=0, B=1, C=2, D=3, E=4.